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ABSTRACT

National Longitudinal Survey on Youth data indicate a large proportion of each youth cohort is still struggling in the labor market in their early 30s. Unemployment spells of long duration are common. A future problem is scarcity of needed skills in the kinds of jobs that will have to be created if the nation's economy is to regain its competitive edge. The United States' lack of a system of school-to-work transition is an obstacle to achieving the goal of getting the most out of each worker. Program models that illustrate "best practice" in the integration of school and work tend to cluster in two general categories: programs built around curricular approaches that bring work and career issues into the classroom and programs that get young people out of the classroom and into work and the labor market. Consensus is developing in the literature and among practitioners on basic building blocks of an effective career preparation system that underlie four recommendations for federal policy: (1) encourage continued experimentation with and learning from diverse school-to-work programs; (2) support development of the basic elements of a national skills training system; (3) focus federal resources on employer participation and teacher development; and (4) use its authority and resources to promote a new vision of government's role. (Appendixes include a 32-item bibliography and "A Memorandum on the Youth Transition" by Paul Barton.) (YLB)

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IMPROVING THE TRANSITION FROM SCHOOL TO WORK IN THE UNITED STATES

RICHARD KAZIS

With a memorandum on the Youth Transition by

PAUL E. BARTON

American Youth Policy Forum
Competitiveness Policy Council
Jobs for the Future

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This is the first in a series of occasional reports published by the American Youth Policy Forum and cooperating organizations dedicated to improving the transition of American youth from success in schooling to success in their lives as workers, parents, citizens and lifelong learners. These reports continue the inquiry undertaken by Youth and America's Future: The William T. Grant Foundation Commission on Work, Family and Citizenship, published in 1988 as *The Forgotten Half: Pathways to Success for America's Youth and Young Families.*

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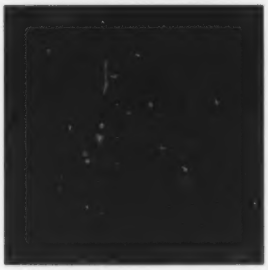

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by Richard Kazis

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I

INTRODUCTION

IT IS A WELL-KNOWN STATISTIC THAT ONLY ABOUT 50 PERCENT—roughly 1.4 million—of this nation's young people enter some form of postsecondary education program the fall after they graduate. Of these, only about half successfully complete a baccalaureate program. For the other half—representing three out of every four who embark on the journey toward adult careers and responsibility—the road is rough and the transition often painful.[1]

These young Americans are generally ill-prepared while in school for the world of work they are about to enter. They receive little guidance on how to move into a career that can support a family. Their reading, writing, math and communications skills are generally inadequate for the demands of today's quality employers. They are shut out from jobs in many of the nation's most stable, high-paying, and high-status large employers. According to the U.S. General Accounting Office, while postsecondary students are subsidized with federal support, those who never enter or who drop out of the higher education system lose out on over $10,000 of public investment in their future (US GAO, 1990).

In this country, four-year college is seen as *the* route to occupational advancement and careers.[2] Counselors in high school advise about colleges, not careers. A 1981 survey by the Educational Testing Service found that almost half of all high school students never talked to a counselor about occupations (Chapman and Katz, 1981). Job search assistance is minimal. In that same survey, only six percent of high school counselors reported spending more than 30 percent of their time helping students find jobs. Recruitment by employers is targeted to college and professional schools; there is little or no formal recruitment by employers of high school students or graduates.

The Commission on the Skills of the American Workforce summarized the treatment of work-bound young people in this way (1990):

> There is no curriculum to meet the needs of non-college-bound youth, no real employment service for those who go right to work, few guidance services for them, no certification of their accomplishments and . . . no rewards in the workplace for hard work at school.

Once young people enter the job market after dropping out or completing high school, they face an extended period of labor market adjustment, characterized by years of alternating spells of casual work and unemployment (Osterman, 1980). They flounder around, learning little in the way of productive job skills, moving from job to job, dropping in and out of the labor force and connecting intermittently with adults in the workplace. During this period in their lives, young people experience rates of unemployment higher than those of adults, earn lower wages than adults, and spend longer stretches out of work and out of the labor force than adults.

All of this sounds bad: bad for too many young people and bad for the society that loses out on their potential productivity. But before we assume that the way many young people—particularly the "non-college-bound"—enter the labor market is a problem demanding dramatic policy interventions, we must first step back and ask a series of hard questions:

- What are the costs of this American way of entering the labor market?
- How significant are those costs—to individuals and to society?
- Who bears the costs and how are they distributed?
- What are the long-term consequences?
- And, finally, does the school-to-work transition pattern in the U.S. create any serious obstacles to U.S. competitiveness and improved living standards in the short or long run?

Only by addressing these questions first can we then turn to an assessment of policy alternatives and to recommendations for improving the school-to-work transition.

The following pages, therefore, begin with a clarification and description of aspects of the school-to-work transition problem that need "fixing." We then turn to trends in program and policy innovation at the local, state and national levels that might respond to the challenges identified. Finally, we distill from this analysis a set of policy proposals for the nation.

The author wishes to thank Robert Glover, Samuel Halperin, Leslie Loble, Hilary Pennington and Robert Sheets for their comments and assistance.

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II

SPECIFYING THE SCHOOL-TO-WORK PROBLEM

M.I.T. ECONOMIST PAUL OSTERMAN HAS ARGUED THAT WHILE THE American pattern of entry into careers is indeed chaotic, a period of "floundering" does not in and of itself constitute a serious public policy problem. Young people get an opportunity to experiment and exercise far more choice of careers than their counterparts in countries such as Germany and Japan. Moreover, in many countries—France and Italy, for example—the pattern of labor market entry looks very much like our own. It is even possible to argue that the German apprenticeship system simply defers higher rates of unemployment to the post-apprenticeship years rather than the post-compulsory education years.

But in a recent paper, Osterman (1991) identifies several groups for whom the lack of a structured transition has great and lasting costs. The most obvious group is minority youth. According to 1990 data, only 29 percent of black high school dropouts between the ages of 16 and 24 are working at any job (compared to 57 percent for white dropouts); and only a little more than half of all black youths with high school diplomas are employed (55 percent compared to 79 percent of whites).[3]

The employment picture for black and Hispanic young Americans who do not continue to college is horrible—and it worsened in the 1980s. For these new entrants into the labor force, there is a serious school-to-work transition crisis.

But what about the youth population as a whole? Is there a more general failure in the youth labor market and the transition from school to employment that requires policy intervention?

Using data from the National Longitudinal Survey on Youth, Osterman finds that a large proportion of each youth cohort is still struggling in the labor market in their early thirties. Over 35 percent of all men leaving their twenties are working in jobs they have held for under a year; another sixteen percent have only been in their current jobs for one year. For women who have been in the labor market consistently in their late twenties, the pattern is similar.

Unemployment spells of long duration are common, even for those in their early thirties: about a third of the sample experienced at least one four-week or more spell of unemployment in the previous three years. And these trends show up in the wage data. While 29-31 year-old male high school graduates who had held the same job for three years or more were earning an average of $11.15 an hour, those who were in their job for less than a year were making only $8.67 an hour on average. Osterman concludes:

> Roughly one third of all high school graduates, and somewhat more high school dropouts, fail to find stable employment by the time they are thirty . . . For this group the rather casual American system does not work well.

The data presented thus far describe the youth employment challenge in the present. A complete analysis must move beyond a static snapshot to a dynamic assessment of trends. Is the problem worsening? Will current youth labor market problems become more acute in the future?

Unfortunately, the answer is not as simple as one would like. It depends on if one believes that employer demand for skilled entry-level workers is stable or rising. That is, if we anticipate little change in the kinds of jobs available to young people and the skills those jobs require, the problem will appear more contained than if we assume that tomorrow's jobs will require significantly different and greater levels of skill.

In the expansionary 1980s, as employers looked ahead to an era of smaller youth cohorts (comprised of larger percentages of minority and female workers), they began to express concern about the supply of qualified young workers (Johnston and Packer, 1987). By the end of the decade, leaders from industry, universities, and the public sector had come to a common belief that restoring Ameri-

can competitiveness would require significant improvements in the preparation for work of the nation's young people. Concerned about the high costs to firms of remedial education for new workers and swayed by forecasts of bottlenecks in non-baccalaureate technical occupations, many employers began to agitate for new strategies to prepare young people for employment.

Employer rhetoric, however, outstripped the reality—at least in terms of short-term demand for higher skilled workers and for higher skilled young workers in particular. There is general agreement now that the introduction of new technologies and forms of work organization designed to improve cost and quality increase the skill demands on the labor force. "High performance" work organizations require workers at all levels of the firm who can analyze data, communicate clearly, learn rapidly, participate in managerial decisions, and work well in teams. As firms move in this direction, skill demands do increase.

However, the transition of American firms toward new work organization and technologies is slow. Based on survey research of a cross-section of American firms, the Commission on the Skills of the American Workforce (1990) concluded, "95 percent of American companies still cling to old forms of work organization."

Wage evidence, too, appears inconclusive. On the one hand, real wages of high school dropouts and graduates fell significantly in the 1980s relative to college graduates, suggesting a growing skills gap. However, a study by economist McKinley Blackburn and two colleagues found that demand side factors such as the rate of technological change and shifts in the industrial composition of employment of workers with different skills explained little of the growing wage gap among workers with different education and skill levels (Blackburn, Bloom and Freeman, 1990).

Given these various findings on the demand side, a typical formulation of the emerging consensus on the "skills debate" concludes that:

> The problem is not a short supply of skills for the kinds of jobs that presently exist, but scarcity of skills required in the kinds of jobs *that will have to be created* if the nation's economy is to regain its competitive edge (Stern, 1990).

That is, if we keep going down the track we're on, we won't have much of a skills gap; but we also won't have much of a competitive economy. Worker skill levels must be raised, for both incumbent workers and new entrants to the workforce, not because the existing demand is so great, but because the alternative economic strategy—a low wage one—is politically and socially unacceptable. We must prepare our workforce better now not because employers need those skills today and not because a higher skilled workforce will lead inevitably to greater employer demand for high skills, but because employers had better organize their operations to demand those skills tomorrow.

When we look at the hiring strategies of American employers regarding young people, the gap between rhetoric and reality is even more stark. As Ray Marshall and Robert Glover argue, America's best employers—even those most publicly active on issues of school reform—tend to "choose *against* youth" (Glover and Marshall, 1992). A 1983 survey by the Conference Board concluded that fewer than one in ten large American firms hired new high school graduates. Firms that offer good wages, attractive benefits and internal career ladders have first pick in the labor market; and they rarely choose high school graduates. These exemplary firms, which are best equipped and most likely to provide high quality training to their employees, invariably choose older, "more mature" workers for their entry-level career opportunities.

This reality is very different from that of many of our leading economic competitors, including Germany, Japan, Sweden, and Denmark. The lack of connection between primary employers and young people in this country is costly to society, even if it suits individual employers. Glover and Marshall point to four consequences of conventional American hiring practices:

1. The delay in hiring American youths provides German, Japanese, and other nations' youth a five- to ten-year head start in gaining access to significant occupational skill training.
2. By "choosing against youth," the best American employers are disengaged from the process of instructing and socializing their future workers.
3. The delay in hiring high school graduates eliminates a natural communication loop for employers to articulate to schools the skills needed in the workplace.
4. By disconnecting effort and achievement in school from rewards in the workplace, these hiring practices undermine student incentives to work hard and achieve in school.

Contrast this to Japan, where employers have semi-formal long-term agreements with schools and where schools play a far more active role in allocating students into the labor force. The best firms hire the highest achieving students from the best high schools. These institutional links give students an economic incentive to work hard that does not exist in the U.S. (Rosenbaum and Kariya, 1989).

Or consider the German apprenticeship system. About 85 percent of the non-college-bound in Germany enroll in one of over 400 three- to four-year apprenticeships. Employers provide training and mentoring that combine practical skill-building with socialization and confidence-building. By age 19 or 20, young people have already benefited from a significant investment of time and training

from employers—an investment that U.S. firms are unwilling to make in young people until five to ten years later in their working life (Hamilton, 1990).

Other industrialized nations—such as Sweden, Switzerland, Denmark—have their own variations of an apprenticeship system, combining both school and work for non-university-bound students so they can learn from first-hand experience with employers what it takes to succeed and be productive in a modern firm. In each of these countries, young people learn to value craftsmanship and develop self-esteem. While American young people move from one short-term, low-expectation job to another and receive little orientation to careers or training, young people in these countries gain pride, progressive mastery of increasingly difficult skills, and experience working in an adult world.

If international competitive pressures increasingly require us to get the most out of each and every worker, the U.S. non-system of school-to-work transition is an obstacle to achieving this goal. It fails minority youth dramatically. It poorly serves a significant percentage of all youth. And it could be restructured to give hundreds of thousands of American youngsters greater incentives and opportunities to be more productive sooner in their careers.

It seems clear, then, that there are compelling reasons to look for public policy strategies to improve the American way into work for the non-baccalaureate.

- The high costs of the current non-system to individuals and society is a primary reason.
- Another is strategic: preparing young people for work and citizenship has broad legitimacy as a public policy concern. Education and preparation for adult responsibility have long been accepted as essential public responsibilities.
- In addition, the return on public investments in the future productivity of young people is potentially great. Given that young people's entire work life lies ahead of them, wise investments in the human capital of our youth can have a large payback to individuals and society.
- Finally, there is demonstrated desire—among employers, young people, parents, and educators—to address the school-to-work transition in the U.S. This may be an easier place to begin construction of a national training system than more contentious human investment policy issues, such as incumbent worker training.

Of course, we must reiterate that a policy strategy focused only on the supply-side is insufficient and will have limited impact. Increasing the supply of skilled young people without increasing employer demand for those workers and their skills will be wasteful and, to an extent, cruel. Similarly, improving young people's understanding of the labor market and of potential careers is no substitute for access to the labor market and real work experience. In the coming years, employers will not only have to become more involved with the content of education; they will also have to become more committed to the provision of employment and training to young people.

Our nation must plan for the future *as if* employers will move more and more rapidly toward productive new technologies and forms of work organization in order to survive and prosper. Innovations on the supply side of the labor market must proceed without waiting for demand-side strategies to be put in place. At the same time, supply-side interventions cannot be privileged over demand-side strategies. The two must go hand in hand. Policy strategies must be developed that encourage and facilitate greater employer commitment to the education and training of young entrants to the labor force.

III

STRATEGIES FOR IMPROVING CAREER PREPARATION

IN THE 1970S AND 1980S, AS THE COMPETITIVENESS DEBATE sharpened and human resource quality assumed an increasingly prominent place in that debate, a significant shift occurred in consensus thinking about youth policy. The challenge facing the nation in serving its young people was redefined: The focus on dropout prevention and targeted "second chance" programs for the economically disadvantaged was expanded to include a new concern for what the influential 1988 Grant Commission report labelled the "forgotten half." The shift can be charted through the visibility and impact of three reports in the last decade: *Workforce 2000* in 1987; *The Forgotten Half* in 1988; and *America's Choice: high skills or low wages!* in 1990. Together, these studies encouraged and effected a redefinition of youth policy from the arena of social welfare policy for the most difficult to employ to that of competitiveness and economic policy designed to reach all young people. A recent summary statement by the William T. Grant Foundation Commission on Youth and America's Future (1991) epitomizes this shift:

> America cannot afford to waste one student. The public schools must assure that all our students, those who will go to college as well as those who will seek employment directly after high school, meet much higher standards of achievement, standards squarely tied to the skills that workers need to make successful careers in the new high-performance workplace that the nation needs to restore its prosperity.

Consistent with this redefinition of the "youth problem" to emphasize more universalistic approaches to preparing young people for occupational and academic advancement, the school-to-work transition has emerged as a focus for exciting program and policy innovation. There has been a burst of interest and efforts at the local, state, and national levels designed to improve the academic and occupational options available to young people who will not earn a four-year baccalaureate.

New programs are being created in cities and towns around the country. Legislation has been enacted in a number of states, including Oregon, Wisconsin, Georgia, Arkansas, and Maine. In other states, such as California, New York, and Rhode Island, influential task forces have proposed comprehensive school-to-work transition reforms. In Congress, a bewildering number of competing initiatives has been introduced. This activity is headed in two related, but distinct, directions:

1. toward experimentation with and strengthening of existing program models that appear effective or show promise
2. toward efforts to create the infrastructure for a national school-to-work transition system

What unites these efforts—those at the program level and those that are more systemic in scope—is a commitment to coordination and integration along three dimensions:

- The integration of academic and vocational learning
- The integration of work-based and school-based learning experiences
- The integration of secondary and postsecondary opportunity

A. Innovative Program Models

The following pages highlight examples of program models that illustrate "best practice" in the integration of school and work. Specific models are described and their evolution charted. As often as possible, exemplary programs are noted. The goal of this review is to highlight the diversity of existing strategies for improving the career pathways open to young people in this country. In addition, the lessons of this programmatic activity inform both the principles and specific policy recommendations presented later in this paper.

For young people who are still in high school, innovative programs to strengthen the connection between school and work in the U.S. tend to cluster in two general categories:

1. Programs built around curricular approaches that bring work and career issues into the classroom (including vocational education's mandate to integrate academic and vocational education; Tech Prep; career academies; and SCANS implementation efforts).
2. Programs that get young people out of the classroom and into work and the labor market (including compacts, cooperative education, school-based enterprises, service learning, and youth apprenticeship).

This distinction is sometimes difficult to sustain in practice. Many of the best programs around the country are working to build both components simultaneously—i.e., school-based development of applied curricula and "real-world" problem-solving; and work-based learning of differing intensities and formality. At the same time, the distinction is a helpful one, for it emphasizes one of the central differences among programs, which is the extent to which a program connects young people directly to the local labor market.

1. In-school approaches to improving preparation for high-skill work

Career exploration: In many prosperous countries, including Sweden, career exploration is built into the school curriculum from the earliest years. Elementary school students visit workplaces, talk to people who work in them, and gain an increasingly broad and textured understanding of career options that may be available to them. In the U.S., there is growing recognition that this should be part of our school learning, too. In school districts around the country, but in a fairly ad hoc way, there is growing experimentation with ways to build this kind of learning about work into school life early, so that young people will be better equipped to make preliminary career cluster choices by the end of compulsory education. One of the most interesting is a novel year-long ninth grade course in Cambridge, Massachusetts, called CityWorks, which gives first-year vocational education students a chance to "build" their city and to explore the kinds of jobs that are done by people who work there. This program recently won a Ford Foundation award for innovation in state and local government.

Integration of academic and vocational education: Historically, U.S. schools maintained a dichotomy between academic and vocational courses: Academic courses got you ready for college; vocational courses got you ready for work. Academic courses stayed away from applied, work-related approaches to instruction. Vocational courses were rarely used as opportunities to introduce or reinforce basic academic skills in reading, writing, math or science. This wall between the two came under intense criticism during the 1980s: The division perpetuated an unfair tracking system; it failed to provide students with the basic skills they needed to function in the workplace; and it flew in the face of cognitive research on how people learn.

As a result, the 1990 Amendments to the Perkins Vocational Education Act mandate that federally funded vocational education basic grants be used in programs that "integrate academic and vocational education. . .through coherent sequences of courses so that students achieve both academic and vocational competencies." A recent survey by Norton Grubb and others from the National Center for Research on Vocational Education has found that states and localities are pursuing a diverse range of approaches to meet this mandate, from the integration of academic content into vocational courses and the integration of vocational problems into academic courses to restructured programs that use team teaching, block scheduling, and whole new curricula (Grubb et al., 1990). These researchers see the integration of academic and vocational education as an impetus for important changes in education. They conclude:

> In attempting to integrate different subjects, teachers are forced to collaborate, to confront the deficiencies of the traditional academic teaching style, the liabilities of too-large classes; in developing coherent programs, educators must come to some decisions about what a coherent curriculum means, how students can learn to make intelligent choices, what the connection is between school and the rest of society in which it is embedded.

One important vehicle for the integration of academic and vocational learning mandated in the Perkins Act is the requirement that vocational programs provide instruction in "all aspects of the industry," defined to include planning, management, finances, technical and production skills, underlying principles of technology, labor and community issues, and health/safety/environment issues. Such broad occupational training, if done well, requires that academic and vocational learning be coordinated and integrated. A small group of vocational programs assisted by the Washington-based Center for Law and Education is experimenting with approaches to the implementation of this "all aspects" mandate. While effective implementation of this mandate is still rare at the local level, this provision points the way toward a much broader conception of vocational education.

The integration of academic and vocational education is now at the core of federal guidelines for vocational education programs. The following program initiatives and

models, each in its own way, are designed with integration of academic and vocational learning as a basic program element.

Tech Prep: Tech Prep is one of the leading new initiatives in vocational education. The defining element of Tech Prep is the articulation of high school and community college programs in specific occupational areas. For this reason, Tech Prep programs are often called "2+2" models. The goal is to smooth the transition from high school vocational programs into more advanced postsecondary programs in the same field by coordinating course requirements, reducing duplication and, in some cases, granting advanced standing for courses already taken in high school (Hill and Parnell, 1991).

The 1990 Amendments to the Perkins Act allocate funds to stimulate Tech Prep activity. Even before that funding boost, the National Tech Prep Clearinghouse identified 122 programs in operation in 33 states. There is no doubt that this model will grow and develop.

Articulation or coordination between secondary and postsecondary programs does not necessarily change vocational education in ways that would strengthen the links between school and work. Some have called Tech Prep a "school-to-school transition program." However, the potential is there. The Center for Occupational Research and Development has created a set of applied academics curricula—in math, physics, communications and biology/chemistry—designed for use in Tech Prep programs. In addition, federal legislation specifies that special consideration be given in funding Tech Prep efforts to programs "developed in consultation with business, industry, and labor unions." On paper, most Tech Prep models include some work-based learning component, but Tech Prep implementation is essentially school-based at present. In the future, it is likely that more Tech Prep programs will introduce part-time, school-year employment and full-time summer jobs with employers who are advising on curriculum and implementation, particularly in the postsecondary years. It is certainly feasible to make Tech Prep a more work-based program than it is.

High school career academies: The career academy movement began in Philadelphia in 1969, with the opening of the Electrical Academy at Thomas Edison High School—a school with the highest dropout rates and lowest attendance rates in the city. The academy model uses a "school-within-a-school" approach, builds curriculum and activities around a single industry cluster, and integrates academic and vocational learning through coordination among teachers who work closely together. The target population is "at-risk" young people in danger of dropping out of school (Academy for Educational Development, 1989).

The model quickly expanded to other industries in Philadelphia and was soon picked up in Pittsburgh. In the early 1980s, the Sequoia Union High School District created the California Partnership Academies targeted to a similar "at-risk" population and using a similar school-within-a-school approach, though one that begins in tenth rather than ninth grade. There are currently as many as fifty career academies in California (Stern, 1990).

Each academy is organized around a specific occupation or industry theme (e.g., health, electronics, graphic arts). Students develop individualized academic and occupational goals, but they do not earn formal occupational skill credentials. Students work in the industry during the summer after junior year. An extended internship is provided to all second-semester seniors. Employers also donate time as mentors and provide equipment to the schools. In general, there is little specific coordination and integration between students' work experience and their classroom learning (Bailey and Merritt, 1992).

Career academies are highly regarded both as dropout prevention programs and as college preparatory programs. (For evaluation data, see Stern et al, 1989; Stern, Raby and Dayton, 1992.) About two-thirds of academy graduates in California have continued on to postsecondary education. One noteworthy program is the Oakland Health and Bioscience Academy. This school-within-a-school at Oakland Technical High School maintains a 96 percent attendance rate, and more than 80 percent of its graduates meet the entrance requirements of the University of California system, compared with less than 20 percent of the Oakland School District's graduates (Education Writers Association, 1992). While the programs cost a bit more per student than traditional high school, this is a model with the potential for broader replication.

SCANS: SCANS, the Secretary's Commission on Achieving Necessary Skills, was created by the Secretary of Labor in May 1990 to examine the demands of the workplace and whether young people in this country were capable of meeting the entry-level requirements of the new economy. A public-private collaboration, the Commission spent two years identifying and formulating a framework for categorizing entry-level workplace competencies. They created a framework that specifies three broad foundation skill areas (basic academic skills, thinking skills, and personal qualities) and five categories of workplace competencies (use of resources, interpersonal skills, information, systems, and technology) that are needed for solid job performance by any worker (SCANS, 1991).

The Commission advocates that this "worker know-how" be taught in all schools and that young people receive certificates documenting mastery of SCANS competencies. While an intriguing idea, introducing SCANS competencies into established curricula will be extremely difficult. It will require new teaching skills that emphasize

problem-solving and contextual learning, new instructional materials and technologies, and ways for teachers to develop a far better understanding of the nature of high performance workplaces. The Commission also recommends integrating SCANS skills into all federally funded youth and adult programs, including vocational education.

There has been some modest experimentation with trying to teach and assess SCANS competencies in the schools in Fort Worth TX, Tampa FL, and Louisville KY. The Los Angeles Unified School District plans to assess all high school graduates starting in 1994, but has done little to incorporate the new competencies into the curriculum. Florida has incorporated SCANS competencies into statewide student performance standards, though a strategy for implementation is still being developed (SCANS, 1992).

2. Work-based strategies for increasing academic and occupational skills

As noted above, the distinction between "school-based" and "work-based" strategies is not as clean and neat as proposed here. However, the distinction is an important one, for it reflects two different emphases of current experimentation. The programs described below share a common assumption that by linking work and school experiences directly, young people can become better at both. They assume that experience in the adult world of work and responsibility can be a powerful catalyst to greater self-esteem and to workplace and academic skill-building. They see getting young people out of the classroom and into work as an important learning strategy.

The programs profiled below are quite varied. Compacts, pioneered in Boston, tie quality employers to schools through job guarantees for students who stay in school and perform well. Co-op education, the largest structured work-and-learning option in this country today, involves between 400,000 and 500,000 11th and 12th graders in a structured work program related to their area of vocational education specialization. Youth apprenticeship is so new a movement as to exist only in a few dozen demonstration programs and in the workforce preparation reform plans of the federal government and a growing number of state governments. Youth apprenticeship is also the most ambitious of these strategies for combining workplace experience and training. Because of the commitment it demands from employers, youth apprenticeship—like cooperative education—is likely to require specific efforts to inform, support, and provide financial incentives to employers and their organizations if it is to expand significantly.

Other strategies for getting young people out of school into learning experiences at work—school-based enterprises, service learning and youth service—respond to two limitations of an employer-focused approach: 1) what to do in labor markets, such as rural areas or decaying cities, where the employer base is too thin to support extensive apprenticeships or co-op internships; and 2) how to use young people's energy and initiative to respond to social needs that private employers are not in business to address directly.

School-based enterprises enable young people to be entrepreneurs and to create and run their own businesses, learning all the different aspects of what it takes to succeed in business. Service-learning strategies enable young people to work in and learn through their participation in community service projects. In general, these work experiences are unpaid. Youth service and Youth Conservation Corps programs typically involve paid work—minimum wage for the work component and, often, post-graduation scholarships for further education.

These different program models can be seen as related strategies for getting young people out of school and into positions of responsibility at work, as part of a palette of work-based career pathways that can complement each other and smooth some of the inevitable cyclical shifts in employer demand for entry level workers.

Compacts: In 1982 in Boston, the public schools signed a "compact" with the city's businesses, universities, labor unions and the Mayor's office that promised improved academic achievement and work preparation in the schools in exchange for increased opportunities for employment and higher education for city youth. The compact strategy uses the promise of employment as an incentive for young people to stay in school and do well; eligibility for jobs and financial aid are tied to staying in school and getting good recommendations from teachers. In addition, the compact strategy uses the mobilization of private sector resources as a carrot to get the school system to pay more attention to the needs of non-college-bound youth.

Renegotiated in 1988 when the business community felt that the schools were not keeping up their end of the bargain, the Boston Compact is seen by many as one important factor in the lower-than-national-average youth unemployment rate in Boston throughout the 1980s and the virtual elimination of black-white differences in youth unemployment rates in the city—an achievement to which few other cities can point. In 1989, over 1,100 graduates (about one-third of the graduating class) found full-time jobs averaging $6.75 per hour in over 900 Boston businesses. While the end of Boston's economic boom and the deepening recession have lowered the number of placements, the Compact still provides an institutional home for school-business partnerships and for rethinking the relationship between school and work in Boston high schools (Marshall and Glover, 1992).

The National Alliance of Business sponsored an effort in the late 1980s to replicate the Boston Compact's

school-business partnerships in twelve cities. NAB provided some seed funding and limited technical assistance to coalitions representing the city government, the school district, and the business leadership in each city. In some communities, most notably Louisville KY and Pittsburgh PA, the efforts led to a range of collaborative efforts to link the provision of jobs to improved performance by students and schools. In general, though, progress proved difficult to accomplish or sustain, as turnover of key leaders, turf battles, and inadequate definition of vision and goals took their toll (National Alliance of Business, 1991).

The Compact model itself is not really an attempt to integrate school and work-based learning. The primary focus is neither classroom instruction and pedagogy nor the quality of learning on-the-job, but rather the use of employment and higher education as incentives to motivate young people to stay in school and to learn. The Compact model is best seen as a base from which to expand toward the integration of school and work and the evolution of the workplace as a learning site for young people. Its history to date provides a number of powerful lessons for any school-to-work transition effort, particularly the importance of:

- An intermediary organization that can institutionalize relationships between schools and employers
- "Job developers" or "career specialists" who work closely with the employer community, soliciting summer and part-time school-year job commitments, and who help maintain good student-employer relationships
- Specifying performance goals with qualifiable objectives and a process for measuring—and publicizing—performance against those goals on a regular basis

As Ray Marshall and Robert Glover argue, a customized Compact can be the institutional foundation for building a coherent school-and-work system at the local level.

School-based Enterprises: In some high schools around the country, perhaps more often in rural than urban areas, groups of students spend part of their school-week providing services or goods for sale to the community. Common "school-based enterprises" include: school restaurants, construction projects including home building, child care centers, print shops, farms, auto repair shops, hair salons and retail stores (Stern, 1990). While these small businesses are usually affiliated with vocational education programs, there are notable exceptions, such as the famous Foxfire publishing program in Georgia.

School-based enterprises allow students to apply their classroom knowledge to the real-world problems of real businesses. At their best, they serve to reinforce knowledge and skills gained in regular classes. For example, a smoked-fish export business in a Sitka AK high school integrates academic and vocational learning by involving students from the math, art, business and computer and Pacific Rim Culture classes. A bicycle repair shop run by students in a middle school became the context for teaching and learning math concepts such as fractions and percentages, business concepts such as profit and loss calculations, writing skills (for grant applications) and personal consumer skills through managing the business' checking account (Stone, 1989).

Two of the most ambitious efforts to build school-based enterprises into school programs include: the Montgomery County Student Vocational Trades Foundations and REAL Enterprises.

The Montgomery County program sponsors two enterprises that provide work experience for vocational education students. One, the Construction Trades Foundation, involves about 350 students a year—from architectural design, interior design, landscaping, food services, ceramics, cabinetmaking, marketing, printing, and journalism vocational programs—in a county-wide program that builds one or two houses a year. The Automotive Trades Foundation reconditions used cars and sells them. In its first ten years, the Foundation rebuilt and sold more than 675 cars. Both are non-profit organizations with boards of directors representing the local business and professional communities.

REAL Enterprises is an entrepreneurship training program that has been replicated in schools in a number of rural Southern communities. REAL uses the creation of school-based enterprises as the vehicle for teaching students about running a business in all its aspects. While it has proven difficult to sustain all but a few of the undercapitalized enterprises created by REAL program participants, the educational and social value of REAL's programs has been significant. Learning academic and business skills through planning and running a small business has been a motivating and exciting process for hundreds of young people in communities where the employer base is too thin to provide sufficient jobs and training opportunities in the private sector. REAL businesses have included a day care facility at the school, a delicatessen restaurant and a printing business.

Co-op Education: About eight percent of American high school juniors and seniors are enrolled in cooperative education programs (USGAO, 1991). While this seems like a small number—and enrollments appear to have dropped during the 1980s—co-op education is by far the most commonly available option for work-based learning in the U.S. Roughly 450,000 young people participate annually. Business and marketing programs are the largest sponsors of co-op education positions.

Co-op education is run by individual schools as part of their vocational education program. Employers provide part-time jobs during the school year, most often to twelfth graders, in the field of the student's vocational concentra-

tion. The classroom vocational instructor or a school-wide co-op coordinator arranges job placements and writes a training plan that clearly specifies—for both the employer and the student—what the student is expected to learn on the job. The teacher usually visits the student periodically at the worksite. The workplace supervisor evaluates job performance. Thus, co-op links work experience in a closely related field with a student's high school program. Moreover, workplace supervisors play a role in evaluation and, often, mentoring.

The Dauphin County Technical School in Harrisburg PA is a typical, well-run co-op program. Two full-time co-op teachers work with employers to develop new job slots. These teachers visit each co-op student about once every two weeks. They prepare with the students and their employers the training agreements that specify the skills employers are expected to teach students. The teachers try to negotiate with employers to include a few additional tasks that add complexity to the largely entry-level jobs. Participation is limited to twelfth graders who have a C average and no F's or incompletes in eleventh grade. About half the seniors participate.

The federal government provides some support for co-op education at the secondary level through the Perkins Act and through the tax code, but this support has declined in the past few years. The 1990 amendments do not specify co-op as an activity to be funded under the basic grant, though the 1984 amendments did. Co-op is specifically mentioned in the section of the 1990 Amendments creating Community Education and Employment Centers, but no funds have been appropriated for these centers. The Targeted Jobs Tax Credit was a source of funding for co-op students from 1978 until the 1981 tax bill, which limited eligibility to economically disadvantaged young people and reduced the amount of the credit after it was found that employers would have hired co-op students without the credit (Stern, 1990).

Evaluations of co-op education have shown higher levels of satisfaction with school among high school co-op students, but inconclusive results on employment and earnings for non-co-op students. Some researchers have argued that existing research assumes that co-op and non-co-op jobs held by high school students are comparable. It may be, though, that co-op placements are better positions, with greater responsibility, better supervision and mentoring, and more opportunities to learn complex skills (Stone, Stern et al., 1990).

Two obstacles stand in the way of significant increases in co-op education placements: cost to schools and employer willingness to provide jobs. The coordination and integration function played by the coop coordinator adds to program costs. And employer resistance to hiring and training young people is an obstacle to expansion of many programs. As University of California economist David Stern notes, these are the same obstacles that exist to dramatic increases in apprenticeship programs for young people.

Youth Apprenticeship: Perhaps the most ambitious—and newest—approach to linking learning in school and at work in the U.S. is youth apprenticeship. This model takes its inspiration from European training systems that provide structured, non-university routes to good careers through a combination of paid work and training on-the-job with related classroom instruction. In countries such as Denmark and Germany, as many as 60 percent of young people enter careers through such structured apprenticeships, most of which last between three and four years[4] (Hamilton, 1990; Casey, 1986).

Advocates of such programs in this country acknowledge the very different educational and industrial institutional structures in the U.S. and do not imagine transferring the German system or any other national system to this country. They do, however, see the coordination between employers, schools, labor and government required by youth apprenticeship as a potentially powerful vehicle for improving both the education and the economic prospects for young people (Tucker and Marshall, 1992).

Given the relative newness of youth apprenticeship as a concept in the U.S., no single model has won general acceptance. There is increasing consensus, however, on the principles that should guide any youth apprenticeship program or system and on the basic design elements that differentiate youth apprenticeship from other, less intensive models for linking school and work (Jobs for the Future, 1991). These are:

- *Active participation of employers*: Employers provide jobs, training, and mentoring to participants; they also participate in the development of curricula and establishment of industry standards. Jobs should be of progressively higher quality as the apprentice moves through the multi-year program and should be tied to clear career ladders in the industry.
- *Integration of work-based and school-based learning*: Classroom instruction and workplace experiences are coordinated so that the learning at one location reinforces the other. This coordination is structured through regular interaction and planning between employers and school personnel.
- *Integration of academic and vocational learning*: As with the best of vocational education reform, youth apprenticeship programs break down the barriers between academic and vocational learning and infuse each with aspects of the other. They focus on cognitive as well as technical skill development and they prepare students to high academic standards.
- *Structured linkage between secondary and postsecondary institutions*: As in Tech Prep and other efforts to build strong bridges out of high school into postsec-

ondary opportunities, youth apprenticeship models generally begin in eleventh or twelfth grade and provide for a continuation into one to two years of postsecondary learning. Most models specify that postsecondary credits or certificates should be transferable to four-year academic programs.

- *Award of a broadly recognized qualification of occupational skill*: Successful youth apprentices should receive a certification of mastery of occupational skills that is developed and recognized by firms across the industry in which they train. This certification is in addition to academic qualifications earned, including a high school diploma and postsecondary certificate or degree.

There has been a wave of experimentation with youth apprenticeship in the past few years in the U.S.—and interest from communities and states is growing. This interest has been supported and fueled by financial and technical assistance for demonstration projects provided by the U.S. Department of Labor and by a group of foundations that have supported youth apprenticeship initiatives of the Council of Chief State School Officers and of Jobs for the Future, a non-profit organization based in Massachusetts. This activity, however, has a life and momentum of its own, as employers, schools, and policymakers in numerous cities and states have adopted the elements of this model.

Youth apprenticeship programs can be found in industries with labor shortages in key technician-level occupations, such as hospitals, metalworking, printing and other manufacturing industries. They tend to be more likely to develop in communities with a history of creative business-education partnerships. These experimental programs have varied institutional origins: regional vocational centers, comprehensive high schools, Tech Prep programs, district-wide initiatives, community colleges and career academies. In Boston, about 150 juniors and seniors are participating in Project ProTech this year. The program involves three Boston high schools, six hospitals, and a local community college. The Pennsylvania Youth Apprenticeship Program, which began with a pilot site in Williamsport last year, has commitments from about 80 firms in four different labor markets to train youth apprentices in the metalworking industry.

While many new programs are moving in the direction of youth apprenticeship as defined by the basic principles above, few have put all the pieces in place. The quality of the work-based learning and the extent of integration between school and workplace learning varies. The ability of local programs to create occupational skill certifications that are broadly recognized within an industry is hampered by the lack of national standards for entry-level skilled positions in these industries. The development of secondary/postsecondary articulations is uneven.

These efforts are quite new. Few programs have seen an entering class complete the high school years and enter the postsecondary component of the program. Thus, it is still too early to judge youth apprenticeship's success in terms of student outcomes, employer satisfaction, and reform of vocational and secondary education.

Youth apprenticeship is also receiving significant attention at the state level, from state governments trying to rationalize their youth employment and training programs and improve the school-to-work transition. Legislation in Arkansas creating a number of demonstration projects was passed in 1991. Other states—including Oregon, Wisconsin, Georgia and Maine—have enacted legislation that makes youth apprenticeship a key component of overall education and workforce development reform. (See Appendix A for details on these initiatives.)

There are many obstacles to widespread implementation of youth apprenticeship. Like co-op education, youth apprenticeship is unlikely to expand significantly without incentives to encourage employers and schools to participate. Until there are nationally recognized skill standards for training in key industries, it will be difficult to create universally recognized certification of occupational skill mastery. In addition, making the workplace into more of a learning place for young people and coordinating that learning with classroom activities is a serious challenge, one that will require significant resources and time for staff development for both classroom instructors and workplace personnel. Moreover, in unionized industries, winning the involvement of relevant unions at the local and international levels is far from automatic.

At the same time, youth apprenticeship appeals for many of the same reasons that make it difficult to implement. It is a comprehensive school-and-work model that combines high academic standards with access to high skill career opportunities and ladders. It embodies the best of the reform movement in vocational education—the integration of academic and vocational learning and the emphasis on contextual, real-world learning through workplace experience. And it provides real incentives to young people to stay in school and to do well—the incentives of employment and opportunity.

Both President Bush and President Clinton embraced the concept of youth apprenticeship. Each made a campaign pledge to create a national system of youth apprenticeship. The Bush administration's plan called for about $100 million a year to support state-level youth apprenticeship initiatives, most of which would come from existing budget authorizations. Clinton's proposal called initially for a more significant federal appropriation, but the details of what he may propose to Congress are only now being worked out. The new administration may choose to incorporate youth apprenticeship as one element of a comprehensive workforce quality strategy, along the lines suggested in the "High Skills, Competitive Workforce

Act" introduced in 1991 by Senator Edward Kennedy (D-MA) and Representative Mark Hatfield (R-OR).

Youth Service and Service Learning: Paralleling the interest in youth apprenticeship among practitioners and policymakers is a groundswell of support for programs that link young people with meaningful community service. In fact, there is far more experience with and financial resources being committed to youth service today than to youth apprenticeship.

In 1990, the federal government enacted the National and Community Service Act. It established a Commission to provide funding, training and technical assistance to states and communities to develop and expand service opportunities. Several states have created their own youth service programs. Maryland recently set controversial standards for public high school students that require students to perform community service to fulfill graduation requirements. Pennsylvania, one of the leaders, created PennSERVE as a program in the Governor's office in 1987. The program had a budget of over $6 million in 1990-91. The programs appear to have motivational and learning potential: several Pennsylvania schools that have introduced community service have seen attendance of at-risk high school students increase and the proportion of students continuing to postsecondary education climb.

Senators Boren and Wofford have introduced the Community Work Progress Act of 1992, which includes two youth service components: one for in-school young people and the other a residential program for out-of-school youth. The Youth Community Corps for in-school youth would allow secondary school students to earn college scholarship funds by working on approved community projects after school, on weekends, and in the summer. Students participating for six years, beginning in seventh grade, could earn up to $10,000 in scholarship funds or $5,000 in direct payments after graduation. Recently, President Bush proposed increasing outlays for youth conservation corps programs as part of his campaign plan to increase job training resources.

Youth service is also included in several other legislative initiatives, including the emergency summer youth employment program funded under JTPA and several of the urban enterprise zone bills. There is every reason to believe that the momentum for further initiatives in this area will continue to build.

Youth apprenticeship and youth service can be conceived of as complementary initiatives. Both have the goal of getting young people out of the classroom and into situations where they take responsibility, learn employability and work skills, and contribute to community development and well-being. Most youth service programs differ from youth apprenticeship in that they provide unpaid work experiences, generally in organizations and projects designed to improve the local community. They do not provide jobs in the private sector, nor is the focus on a multi-year structured progression of skill development in a particular industry.

One variant of youth service—often referred to as service learning—goes beyond the work experience to include incorporation of lessons from the work into the classroom curriculum. Thus, a class that engages in cleaning up a local stream bed may focus on the ecology of the community and on measuring pollution in their science and math classes or may explore the politics of environmental regulation in their social science course. This integration of service experiences with academic learning at school parallels youth apprenticeship's emphasis on integrating school and work-based experiences.

Youth apprenticeship and service learning can be promoted as two linked elements of a single initiative. Some schools have been exploring the potential for introducing service learning in the early high school years and then moving toward youth apprenticeship when young people reach working age. Together, youth apprenticeship and service learning can provide exposure to private and public sector opportunities, highlight the interconnections between economy and society, and provide two important venues for "real world" experiences and for structured learning built on those experiences.

B. Blueprint for a New School-to-Work Transition System in the U.S.

It is often said that in the United States we are very good at creating innovative programs, but we have a terrible time trying to build comprehensive and coherent policy systems. The school-to-work transition is a case in point. As the above survey illustrates, a host of exceptional program models exist that link school and work in important ways. But these programs coexist uneasily, are replicated thinly and unevenly, and are not part of a set of institutions that make it obvious to young people how to move from compulsory schooling into desirable career pathways.

At various moments during this century, combinations of educators, employers, and labor experts have called for creation of a national system to facilitate the transition from school to careers for the nation's young people. The early 1900s, an era of great and wrenching changes wrought by industrialization and massive immigration, was one key moment. During that period, many looked to the most formidable economic competitor of the day—Germany—for guidance. It was during this period that the federal government first took responsibility for funding high school vocational education.

Today is another such moment. And again, many are looking to our international competitors—Germany,

Japan, Scandanavia—as models. These countries have something we do not: They have clearly defined national systems for preparing young people for productive work in which employers take a major responsibility and in which the non-university routes to success are clearly delineated and have significant status. Increasingly, the call is being heard from influential leaders in business, education, and government that the time has come to overhaul the "non-system" of school-to-work transition in this country.

A consensus is developing rapidly in the literature and among practitioners both here and abroad on the basic building blocks of an effective career preparation system. This consensus is consistent with much of the experience of the "best practice" school-and-work programs described above.

The building blocks include: universal access; high academic standards; increased career exposure and counseling; integration of academic and vocational education; integration of school and work experiences; award of a widely recognized credential based on industry-approved standards benchmarked to international best practice; and clear routes to postsecondary academic advancement. These principles, elaborated below, inform the recommendations for federal policy that conclude this paper.[5]

- The nation needs **a system to which all young people have access,** not just those who meet income guidelines or other specially defined populations. Narrow targeting, which stigmatizes and marginalizes programs, should be replaced with more universal eligibility criteria.
- We must **build a system, not just fund a series of demonstration projects.** Neither employers nor schools nor young people need another short-term program layered on top of the already overwhelming welter of education reform initiatives.
- We must place **new emphasis on career education and guidance**. Career education should become part of the K-12 curriculum so that our children have a rich understanding of the industries that drive our economy and the occupational opportunities within them. Guidance counseling in high school should be about careers, not just about college choices.
- The system must be rooted in **the commitment of quality employers to provide work and learning opportunities** for young people. This would open up the possibility of using jobs and training as an incentive to hard work and achievement in school. And it would connect young people to the labor market in a more systematic and beneficial way.
- **A broad, diverse set of career pathways must be available** for young people wanting to explore and then enter different industries, occupations, and specializations. No single program design will answer the needs of all communities, employers, schools and young people.
- Curricula and teaching strategies must emphasize **active, contextual learning, broad rather than narrow skill training, and the integration of academic and vocational education**. The pedagogy of school-and-work integration should reflect cognitive science research on the power of learning-by-doing and should recognize the growing importance of higher order thinking skills to productive employment and citizenship.
- **The system must not foreclose the possibility of higher education**. The "school-to-work transition" is a misnomer. The end of compulsory schooling can no longer serve as the end of formal learning. Instead, the system should encourage a rich set of routes to lifelong learning in workplaces and educational institutions. Increasingly, we must think in terms of "school-and-work integration."
- An effective system must generate and disseminate **more—and more systematic—labor market information** upon which students and employers can base their career preparation and hiring decisions. Employers should have easier access to useful information on student achievement and better ways to judge applicants' skills and competencies. Students should have more complete knowledge of the performance of different public and private training providers and the employment and income prospects of different careers. Policymakers and the public at-large need more accurate information on the career trajectories of young people after they leave school.

One recent vision of a new national system for developing strong technical and professional skills in young people not going directly to four-year college has been presented by former Labor Secretary Ray Marshall and Marc Tucker in their book, *Thinking for a Living* (Marshall and Tucker, 1992). Their proposal, which takes its cue from international best practice and which builds from the recommendations of the Commission on the Skills of the American Workforce, is quite consistent with the above. They advocate:

1. Career exposure for young people built into school curricula from the first year of grade school through the end of compulsory education (as in Sweden)
2. A system of youth centers for the purposes of recovering young people who have dropped out of school (as in Sweden)
3. A very high academic standard—leading to a Certificate of Initial Mastery—that everyone should meet before they begin vocational education (as in Japan)
4. Access for all students who want it to a high quality, structured, on-the-job learning experience leading

to a universally recognized qualification (as in Germany)

5. A school-based portion of the system based on broad occupational categories rather than narrow specialization and built upon modular construction of curricular units that can maximize individual choice and mobility (as in Sweden)
6. A work-based learning curriculum designed to develop not just technical skills but also learning-to-learn and higher order thinking skills (as in Denmark)
7. A system that provides explicit pathways from any point in it to four-year college degree and university programs for all who wish to take advantage of them (as in Denmark)

IV

RECOMMENDATIONS FOR FEDERAL POLICY

A. Lessons from Practice

Consistent with the emphasis throughout this paper on the need to promote both programmatic practice and systemic change, the federal government should pursue policies that advance along two related tracks:

- Encouragement of experimentation and learning from new models
- Setting in place the building blocks for a system that focuses on performance and outcomes and can therefore accommodate diverse program models

The survey of best practice presented above underscores the importance of this two-pronged strategy. It also leads to several other conclusions that should guide federal policy.

First, as *The Forgotten Half* study prepared by the William T. Grant Foundation Commission emphasized, the "triad of *education*, *service*, and *paid employment*" are central to improving the career prospects of young people in this country. This simple formulation remains a powerful guide to improving the school-to-work transition.

Second, federal efforts should encourage and seed experimentation that is sufficiently long-term to demonstrate program impacts—and that is strategically targeted. Federal incentives should be targeted to programs explicitly trying to improve three kinds of critical coordination:

1. The integration of academic and vocational learning
2. The integration of school- and work-based learning
3. The integration of secondary and postsecondary opportunities

Federal support should be multi-year so that programs will have time to mature and demonstrate results in terms of student learning and labor market outcomes.

Federal resources should also be coordinated and targeted so that the many fragmented and separate parts of our youth education and training system begin to share common features based on what is known about effective education and training. Youth employment programs that have no significant learning component should be restructured to include educational content. Similarly, purely school-based high school programs should be restructured to incorporate a work-based component. Ultimately, programs for in- and out-of school youth, for the economically disadvantaged and for all young people should converge toward a model that integrates structured classroom learning with work experience, that breaks down the walls between academic and vocational learning, and that provides clear pathways to advancement in both the labor market and postsecondary education.

Third, federal activity should go beyond encouraging program innovation to the creation of basic institutional elements of a national school-to-work transition system. Federal system-building efforts should be designed to:

1. Make it easier for local programs to achieve and be held accountable for high, broadly recognized standards of quality
2. Integrate the preparation of new workforce entrants into a seamless system of skill development, beginning in early childhood and continuing through school, postsecondary education, and adult training
3. Strengthen the private sector's capacity and commitment to prepare young people for careers

As European experience shows, the effectiveness of national training systems depends upon institutionalized relationships of trust among diverse groups and interests: among firms that employ similarly skilled workers; between employers and representatives of their workers; and between private actors and public institutions. Given the relative underdevelopment of these relationships and structures in the U.S., federal policy should focus on building capacity outside of government so that non-gov-

ernmental groups and institutions become better equipped and motivated to take a central role in the education and training of young people.

B. New Opportunities

The transition to a new administration in Washington provides a significant opportunity. As Governor of Arkansas and during the presidential campaign, Bill Clinton publicly stressed the importance of the school-to-work transition for the future economic health and wealth of the nation. He has explicitly advocated a greater federal role in creating opportunity for young people who will not earn a baccalaureate through a national youth apprenticeship system and he wants to increase the numbers of young people who attend and complete college through reform of postsecondary financial aid.

There are good reasons for the federal government to move carefully and with restraint. Improving the school-to-work transition is only one of many domestic issues vying for attention and resources in a period when the deficit hangs over all spending proposals. The lack of evidence of program effectiveness for many of the initiatives touted as model school-and-work programs argues against allocation of significant resources to any single model or strategy.

Moreover, the federal government has historically played a limited role in education and training. Education is primarily a local and state affair and resistance to federal control and intervention still runs deep. Training is generally viewed as the responsibility of individual firms that need workers and of individual workers who want to improve their position in the labor market. Federal training policy has been limited largely to economically disadvantaged populations and, more recently, to dislocated workers in need of new jobs and careers.

Finally, in this era, activist government is likely to take a different form than in the 1960s or the 1930s. The government is unlikely to launch new, untested programs. The public does not want government to mandate new initiatives that states and localities, businesses and workers, have no choice but to accept. The more likely federal role, particularly on issues of human resource and workforce development, will be that of partner with non-governmental groups and institutions, acting as a catalyst, facilitator, monitor, and capacity-builder. The emphasis on "reinventing government" will affect the kinds of strategies proposed and championed by the new administration.

These factors, while important to acknowledge, do not argue for maintaining the status quo. The existence of coherent school-to-work systems in other countries depends critically upon the support of national governments. And there are many creative ways for the federal government to encourage, promote, and build a system of new career pathways for young people in this country.

Vocational education provides a good example of the ability of the federal government to leverage its resources. The federal share of vocational education funds is only about ten percent, but because this is flexible, discretionary money for states and localities, federal priorities shape the direction of innovation. This can be seen dramatically in the impact of provisions in the 1984 and 1990 Perkins Act amendments emphasizing the integration of academic and vocational education, instruction in all aspects of an industry, and Tech Prep initiatives.

Only infrequently does the federal government have an opening to think and act systemically. The next few years present one of those opportunities in a number of policy arenas—including education, training, and workforce quality. The challenge will be to continue to encourage diversity and experimentation while moving toward a new system for preparing people for work and citizenship—a system that will outlast a few demonstration projects or another change in administration and that will ultimately redefine how we govern, finance and deliver workforce preparation in this country.

The following recommendations for federal action to improve the school-to-work transition are informed by the above considerations.

C. Federal Policy Recommendations

The federal government should pursue the following strategies and activities to improve the school-to-work transition in the United States.

1. **The federal government should encourage continued experimentation with and learning from diverse school-and-work programs linking schools, employers, and young people.**

No single career pathways model will address the needs of every community and its young people. A range of program models can point to evidence of positive effects on dropout rates, skill development, and personal growth. For others, there is still little reliable outcome data. At this time, it is premature to elevate one model above others. In fact, this is an important time to encourage and accelerate experimentation with different program models moving toward the same goal of improving career options for young people. However, funding for new demonstration projects or for expansion of existing initiatives should be targeted carefully to promote programs that advance key design goals. In addition, sufficient funds should be set aside for program research, development, evaluation and dissemination of results.

The federal government should increase its financial support for youth initiatives that link school- and work-based learning experiences and create high quality opportunities in the labor market.

Federal resources should be targeted to encourage greater integration of:

- Academic and vocational learning
- School-and work-based experiences
- Secondary and postsecondary learning

Each of these has been identified as a critical component of "best practice" efforts to create quality career opportunities for young people. Moreover, each has proven quite difficult to accomplish at the program level. Funds should also be targeted to encourage coordination and compatibility among programs created by different agencies or acts of Congress which advance these several "integrations."

Promising programs that are moving—or could move—in these directions include: youth apprenticeship, career academies, Tech Prep, cooperative education, school-based enterprises, and youth service. A number of bills introduced in Congress in 1992 proposed new funding for youth apprenticeship alone at a level of $100 million a year for five years. On the campaign trail, Bill Clinton proposed spending $1.5 billion to develop a national youth apprenticeship system.

Carefully crafted youth apprenticeship legislation can promote the development of structured work-based components of career academies, Tech Prep programs, service learning and other related initiatives. It can also encourage state-level strategies for improving the school-to-work transition. A funding level of between $250 and $350 million a year for five years would enable the federal government to underwrite significant and sustained research, development, evaluation, and dissemination activities and would provide each state with between two and eight million dollars a year for state system-building and local program activities.

Promising reform directions in federally funded vocational education should be encouraged and accelerated.

The largest single investment of federal dollars in preparation of young people for work is vocational education. Federally funded at about one billion dollars, vocational education has long been accepted as a legitimate area of federal activism. The federal government should encourage implementation of 1990 Perkins Act provisions that stress broad, relevant skill development through:

- The integration of academic and vocational learning
- Exposure to all aspects of the industry being studied
- Significant employer involvement in curriculum planning and program monitoring
- Work experience for vocational students linked to their course of study

Specific recommendations include:

- Appropriate funds already authorized under Title III of the 1990 Perkins Act amendments for Lighthouse School and Community Employment and Education Center programs
- Expand support for staff development and training for vocational education administrators, so these trends can become fully integrated into state and local planning; and for academic and technical vocational education instructors, so that reforms can be implemented in curriculum and instructional practice at the school level.
- Seed experimentation designed to encourage strong Tech Prep programs to include a work-based learning or youth apprenticeship component.

The federal government should expand funding for youth service programs for in-school and out-of-school young people.

Private employers cannot provide jobs and training opportunities for every young person who might benefit. During economic downturns and in labor markets where the interested employer base is thin, another strategy is needed. Moreover, relying solely on private employers limits the potential for creating work opportunities that respond to critical community needs.

The federal government should create a new national youth corps, along the lines proposed by Senators Wofford and Boren. This national service initiative should be designed as part of a comprehensive approach to providing work experience and work-based skill development linked to a school-based education program.

One component of this corps would allow secondary school students to earn postsecondary education scholarship funds and, where possible, wages, by working on approved community projects after school, on weekends, and during the summer. A second component would be residential and would serve out-of-school and out-of-work young people.

The federal government should ensure that new program experimentation yields learning about implementation and impacts that can help shape future reform efforts.

There is much to be learned about the relative cost-effectiveness and the impacts of different school-to-work transition models, as well as the potential of different models to achieve significant scale. Significant federal resources should be invested in research that documents and analyzes the impact of alternative types of programs on parti-

cipants' subsequent labor market and educational experiences.

Funds appropriated for demonstration projects must therefore be of sufficiently long term to enable researchers to assess the implementation process and student outcomes while in the program and upon entrance into the labor market. Each demonstration project should receive a minimum of five years of federal support; but there should be strict monitoring of annual progress with the possibility of cancellation of funding after Year III if progress has been insufficient. Each program should be assessed along comparable learning and labor market outcome dimensions so that comparisons can be drawn across sites.

In addition to evaluation research, the federal government should fund technical assistance that can strengthen state and local efforts. This assistance should be targeted to improve the design of school- and work-based curricula, instructional strategies, and assessment and credentialling systems.

Finally, the research, development, and evaluation effort should be accompanied by an aggressive communications and dissemination strategy.

The federal government should encourage experimentation and program development that promotes convergence in the design of vocational education and youth employment initiatives.

As part of a broad effort to promote policy coordination among programs and offices that address the school-to-work transition, the federal government should encourage youth employment and vocational education programs to incorporate design elements from each other. Basic academic education standards should be introduced into youth employment programs funded under JTPA, including summer and other short-term youth jobs programs. Similarly, vocational education programs should be encouraged to include work-based components. Over time, the distinction between "employment" and "education" programs for young people should blur as both move toward a model that combines general and occupation-specific learning with access to employers and jobs that open the door to career opportunities.

2. The federal government should support the development of the basic elements of a national skills training system serving young people and adults.

Funding of demonstration projects and pilot programs is by its nature fragmented, ad hoc and often of short duration. The federal government must begin to build a comprehensive school-to-work transition system, one that is part of a broad national workforce preparation system for entry-level and incumbent workers.

Because one of the main intended beneficiaries of workforce preparation reform is the nation's employer community, this system must be a public-private partnership in its governance and development. And because of the critical importance of states in the coordination, management and monitoring of education and training in the U.S., it must also be a close federal-state collaboration.

The basic building blocks of a national career preparation and training system—and of the school-to-work transition system that should be embedded in it—should include the following elements specified by Robert Sheets of Northern Illinois University in a paper prepared for the Competitiveness Policy Council (Sheets, 1992):

- Governance structures that have credibility in the private sector and that facilitate interagency coordination and planning
- Occupational skills standards that drive program content and instructional method and that provide the basis for universally recognized certification
- Broadly accepted assessment tools for evaluating mastery relative to those standards
- A national framework for minimum performance standards for education and training providers coupled with a regular reporting system on providers' performance
- Incentives for building private sector institutional capacity and individual demand
- Mechanisms for creating common definitions and eligibility criteria across diverse federal programs and agencies and for minimizing fragmentation of opportunities available to individuals seeking training

While it is beyond the scope of this paper to make detailed recommendations on how the federal government can create a national workforce preparation system, we focus on two components of such a system that are particularly relevant to the school-to-work transition: the development of broad performance standards to guide generic and specific occupational skill development; and the strengthening of career information and counseling services for young people. Without skill standards, youth apprenticeship, Tech Prep, and other programs that prepare young people for careers will lack clear quality benchmarks to guide their efforts. And without a much more effective career information and counseling system, young people will be unable to obtain the information they need to begin to make informed career and career preparation choices.

The federal government should expand the current efforts of the U.S. Departments of Labor and Education to establish a national system of voluntary industry-based skill standards.

School-to-work transition programs are designed to improve the connections between employers and schools in this country, to the benefit of young people and employers. But for these programs to respond to employers' needs and also provide young people with skills that are clearly valued in the labor market, a system of occupational skill standards is needed, benchmarked to the standards of the best of our international competitors and accepted by firms and labor organizations in relevant industries. Negotiating the breadth and content of skill standards requires healthy discussion of the kinds and levels of experience and skills employers expect of young entrants into their industries. Once standards are agreed to, school-to-work transition programs can shape curriculum and instructional method to those benchmarks. In addition, demonstration of mastery then becomes the criterion for advancement and success, not seat-time in a classroom.

As part of the Bush Administration's education strategy, the Departments of Labor and Education were instructed to spearhead a public-private partnership to develop voluntary industry-based skill standards for all industries. Following a series of joint hearings to generate public dialogue and build multi-sector working relationships, in October the Departments announced funding for more than a dozen pilot projects to experiment with innovative approaches to industry-based skill standards and certifications.

New federal school-to-work transition initiatives should further the development of occupational skill standards and of the public-private partnerships that create and legitimate them. Any new funding for youth apprenticeship or other school-and-work programs should require specification of the broad occupational areas in which young people will be trained and of the program's strategy for identifying or creating skill standards to guide curriculum and student learning. By linking the two efforts, the federal government can ensure that program-level experimentation contributes to and accelerates efforts to construct a comprehensive, performance-based national training system. In the same spirit, as sets of skill standards are created and recognized for entry into and advancement in different industries, the federal government should mandate their use in federally funded vocational education and job training programs.

The federal government should assume a leadership role in increasing career information and career counseling to young people.

Career counseling and information are essential to informed choice of and planning for careers. Yet, the federal government and its education reform strategy have ignored career counseling. And neither the Employment Service nor school guidance counselors provide adequate information and materials. In the 1980s, a federal program bringing the counseling and job placement resources of the Employment Service into high schools was abandoned. And there is nothing in this country like the community-based career guidance centers of Germany and Denmark.

The federal government should play a strong role in building institutional capacity and driving reform of career counseling. It should:

- Work with states to establish national goals and standards for career education and counseling for all schools and youth programs requiring individual career development plans
- Devote resources to the development and use of industry- and occupation-specific career information curricula and materials in written and audiovisual form that would appeal to young people
- Expand efforts by the National Occupational Information Coordinating Committee, working with other agencies and with states, to develop a national career information system delivered through state-managed career centers
- Restore and strengthen the federal role in providing counseling, occupational information, and job placement for high school students (and out-of-school youth) through: the Employment Service; support of non-profit organizations that provide such services; and/or the creation of a new system of independent career counseling centers

3. The federal government should focus federal resources on two challenges to broad diffusion of school-to-work transition programs: employer participation and teacher development.

The most critical limiting factor to the development of work-based learning alternatives for young people is the willingness of employers to provide paid work opportunities and structured training. Increasing the voluntary participation of businesses will require targeting some incentives to employers. On the school side, perhaps the most significant obstacle to broad diffusion is the challenge of preparing significant numbers of teachers for instructional methods that emphasize coaching, active and applied learning, and interdisciplinary team-teaching. The federal government should take steps to address each of these challenges.

The federal government should provide incentives to employers and consortia of employers to hire and work with young people in structured school-and-work learning programs.

Economists identify three kinds of incentives available to government:

1) information and persuasion through meetings, materials and marketing strategies that appeal to business decision-makers on economic or non-economic grounds 2) technical assistance that lowers information and capacity-building costs 3) financial incentives to individual firms or groups of firms that can offset training and wage costs. The federal government should pursue a mix of these strategies, being careful not to offer financial incentives when others might suffice. Given the weak organization of employers into associations that work together to upgrade technology, work organization and workforce skills, incentives that strengthen employer associations and consortia should be emphasized.

The federal government should:

- Conduct a coordinated, cabinet-level outreach appeal to business leaders for greater participation in work-based learning programs for young people. These appeals should be targeted to employers in industries with a history of involvement in education-business partnerships, with labor shortages in key technical and professional occupations, and with an ability to influence business leaders in their own and other industries.
- Underwrite the development and dissemination of written and audiovisual materials, how-to guides, and training packages for employers, industry consortia and trade associations. These materials should respond to specific employer concerns about participation and highlight firms already involved in best practice programs.
- Expand demonstration project funding for models of school-and-work integration that explicitly require employer commitments to provide employment and skill development, including compacts, cooperative education, and youth apprenticeship (see #1 above).
- Provide grants to industry-based consortia of firms or their associations to develop and promote work-based learning programs at the local and state levels and to play a central role in ensuring that programs train to industry's needs. These financial incentives will lower employer participation costs, but will not raise equity and efficiency objections that subsidizing youth apprentice wages would.
- Commission or conduct a comprehensive report on the incentives and institutional supports necessary to establish and sustain employer involvement. This report, which should be prepared only after several years of significant new experimentation and research, should make recommendations for legislative or other reforms to stimulate and sustain employer involvement in school-to-work transition efforts, including financial incentives to increase employer participation without providing wasteful subsidies or tax credits for work-based learning that firms would have provided even without financial incentives.

The federal government should aggressively support new strategies for teacher development to prepare classroom and workplace instructors for the active pedagogy of learning that is central to effective work-based learning.

One of the strengths of youth apprenticeship and other efforts to integrate school- and work-based learning is their active, experiential approach to instruction and learning. Of course, this is not the way most high school teachers approach their work; if anything, workplace personnel are even less reflective and conscious of their instructional strategies. For these new ways of linking school and work to have maximum impact, professional development efforts will have to be built into all new programs and system-building initiatives. These efforts should include resources for curriculum development and training in new assessment techniques.

In addition, the federal government should establish a regional network of Professional Development Institutes that experiment with radically different approaches to teacher development. In place of one-time professional development courses provided with little or no follow-up, the Institutes should develop what Lauren Resnick of the Learning Research and Development Center calls " a system of distributed apprenticeship," in which teachers rotate through their own apprenticeship residencies at a number of program sites and alternately receive coaching, reflect on their practice, and coach others in the pedagogy of active, contextual learning. The federal government should investigate certification for school and workplace supervisors and mentors, in conjunction with the National Board for Professional Teaching Standards.

4. The federal government should use its authority and resources to promote a new vision of government's role in the preparation of young people for economic and social opportunity.

The federal government has an opportunity to articulate a new vision of government's role in helping the nation prepare its young people for productive careers and citizenship. It should publicize and demonstrate its full commitment to participating with others in the public and private sectors to increase the opportunities and the quality of education, service, and paid employment for young people. The federal government should project itself as activist in its intention to invest in people; but it should emphasize its role as a partner with non-governmental groups and institutions.

To this end, the federal government can:

1) use its authority and visibility to help shift public opinion
2) use its purchasing power to underscore new youth policy priorities
3) use its own position as an employer to set a positive example for other employers in the private and public sectors

Possible activities:

The new Administration should use the "bully pulpit" of the Presidency to emphasize its commitment to young people, to their education and preparation for careers, and to an activist government role in improving that preparation.

President Clinton should design a series of highly visible activities that focus media and public attention on the plight of our nation's young people and on "best practice" efforts to improve the school-to-work transition in this country. These activities should include events that put highly respected employers in the spotlight and demonstrate both public and private sector desire to take greater responsibility for career preparation for young people. They should include visits to innovative programs around the country.

The federal government should use its significant purchasing power to expand quality youth apprenticeship opportunities on federally funded economic revitalization and public works programs.

In the coming years, significant federal resources will be invested in rebuilding the nation's transportation and communications infrastructure, in the construction and rehabilitation of public housing, and in defense adjustment activities. These federally funded projects provide an opportunity to encourage a significant expansion in employer provision of work-based learning opportunities for young people. (If Head Start is expanded significantly, a similar opportunity would present itself in a service industry.) The federal government should specify a percentage of jobs created by such funds to be set aside for young people in youth apprenticeship or other structured school-and-work programs. An additional set-aside should be considered for out-of-school youth.

The federal government should demonstrate leadership as an employer by committing to provide paid work opportunities in government workplaces to young people in structured learning programs.

The federal government should participate aggressively in youth apprenticeship, cooperative education and other programs that require paid work for young people in school. It should set an example: if these programs are important, then the federal government should also be providing opportunities for young people. This would highlight the federal government's commitment to being an accountable, responsible partner in building the nation's future.

ENDNOTES

[1]In this paper, the term "school-to-work transition" is used frequently. This deserves some explanation at the outset. While this is the most common generic term for educational efforts to prepare young people for the world of work, it is misleading in several respects. "School-to-work transition" implies a single moment when one leaves school and enters the workplace. It is far more typical for individuals to move back and forth between school and work as they position themselves for change during their working lives. The term also implies that the critical moment is the transition to work, rather than the extended preparation through school and work experiences that are at the heart of most "school-to-work transition" programs. Perhaps a more accurate term would be "school-and-work integration" programs.

[2]A modest exception is the registered apprenticeship system, concentrated in the building and construction trades, which does offer non-baccalaureates a route to decent careers; however, this system provides training opportunities to no more than 300,000 Americans a year, few of them in their teens. Only two percent of high school graduates become apprentices. The average age of U.S. apprentices is the late twenties in construction and the early thirties in manufacturing.

[3]The importance of college attendance to minority employment prospects is underscored by further analysis of this data. The percentage of blacks working at any job improves steadily and approaches that of whites as education levels increase. For those with some college, the percentage of black high school graduates working jumps to 79 percent compared to 87 percent for whites. Black and white youths with college degrees show relative parity in their labor force participation and ability to find work.

[4]There is significant confusion about the relationship between youth apprenticeship and registered apprenticeship in the United States. Registered apprenticeship, as noted above, is primarily a training route into the construction trades and some manufacturing occupations. In only rare circumstances is registered apprenticeship an option for young people who have not yet earned a high school diploma. And it serves only a very small portion of the workforce. Youth apprenticeship programs are designed to complement and not compete with registered apprenticeship. In occupational areas where registered apprenticeships are active and are a primary route into the occupation, youth apprenticeship can serve as a pre-apprenticeship program that can grant advanced standing for the related instruction and workplace components. In other fields, youth apprenticeship may or may not be registered with the state or federal labor department, depending on local choice.

[5]The principles emphasized here are distilled from recent writings on this subject by Robert Glover, Paul Barton, and my colleagues at Jobs for the Future.

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A MEMORANDUM ON THE YOUTH TRANSITION

PAUL E. BARTON

There is emerging in the national consciousness a belief that we have a serious deficiency in the system by which youth move from the school world to the work world. What had been dimly seen in the mist by few was crystallized by the two 1988 reports of the William T. Grant Foundation Commission on *The Forgotten Half* and, more importantly, by the four years of *follow-up* in galvanizing public attention to their recommendations, and to an understanding of the nature of this deficiency. If half our youth are forgotten, it is increasingly the case that the documentation of this neglect by the Grant Foundation Commission is now remembered.

In a new stage, begun in the late 1980s, a host of experienced and knowledgeable people have dedicated themselves to figuring out what to do, and then trying to get it done. Progress is being made at this stage of "the beginning of the beginning." There is, for example, a conclusion increasingly shared that we need a complete *system*, not just another program. But there is also, I perceive, some dismay at the complexity of it all. After all, the knowledge base includes the history of how we got in this predicament...that is, the historical dynamics, the education side, the employer side, the union side, the labor market side, and the politics and government side.

Amidst this complexity, a considerable number, including our new President, have alighted upon the term "Youth Apprenticeship." They have seen the apprenticeship systems in Europe work well for a large proportion of youth who do not immediately follow the college and professional path. Different people now use the term to mean a range of things, from a traditional apprenticeship of long-term training provided to youth by the employer, at employer expense—often in collaboration with the union—to any arrangement that utilizes the work-site, to, more vaguely, any school to work transition arrangement that involves the employer. So in a situation that is very complex in terms of finding the levers of change, we start with miscommunication about the meaning of the term youth apprenticeship.

The reason for this memorandum is the hope that it would be helpful to (a) summarize the complexity of the situation, in order to share a common understanding of the environment in which change is to occur; and (b) to deal with the *content* of worksite-based approaches, in order to communicate in terms not encumbered with defining and redefining a term—a term that has had fairly specific meaning since the middle ages, and now is being infused with diverse, new meanings.

The Environment of the Youth Transition

An assessment of the environment and the reasons for complexity is summarized below. The elements are simply stated, not elaborated, nor defended in research terms. (I have done so, however, in publications going back over a period of 25 years.)

1. *Multi-levels of Control*
   We have multi-levels of school control, multi-levels of government, and many thousands of employers. Implementation, even when we think we know what to do, is formidable. Where are the levers of change?

2. *Two Worlds*
   We have a strongly embedded tradition and practice of two separate worlds of school and work. Our vocational education system (or our high school general track) expects to do the teaching. And ask employers about the transition problem and they will tell you how the schools need to improve, not employers. Employers expect to get entry-level workers fully prepared by the school system.

3. *A History of De-Skilling*
   American employers have had, and mostly still have,

a tradition of aiming for reduced reliance on humans, taking decision making and individual skills out of jobs and substituting equipment for labor. That is changing, but slowly, with only a fraction operating on a "high performance" model. Appeals to the need to develop "human capital" will not, all by themselves, mobilize employers to make substantial investments in the training of young entry-level workers (related to #2).

4. *The Hiring Age*
American employers with adult-type jobs that have fringe benefits and advancement opportunities—the kind of jobs we want more high school graduates to get—do not hire until age 22 to 25, even when they hire people with only a high school education. We need not just a new training policy but also a new hiring practice.

5. *Limited Training Investment*
American employers generally invest much less in training than our foreign competitors and the investments they make are for higher-level employees; entry-level workers get little. Asking for heavy investment in training young workers, *young workers they don't even hire*, is foreign to their existing practice (and is, in fact, a foreign practice).

6. *New and Catchy*
While we need to create a "system," in America we tend to think in terms of programs, of demonstrations, of catchy names, of quick results, and most always of something new (although in the case of the apprenticeship term we go to the opposite extreme and reach far back to something very old, which is in relatively long-term decline in the U.S.). A successful approach of ten or twenty years ago will likely be dismissed, whatever the reason for its demise (even if successful vestiges remain).

   A *system* of new institutional roles and relationships does not reduce to a name, like "Quick Start." It is a policy, a forging of new relationships, a creating of new attitudes, and of reversing long-established trends.

7. *Conflicting Viewpoints and Emphases*
We confront a variety of educational and youth preparation theories, some compatible with each other and some not: "Just give them cognitive skills, we will do the training"; "give them good work attitudes and habits"; "give them occupational skills in school"; "get Voc Ed to integrate academic instruction"; "use the workplace for teaching academics in context" (and its opposite: "no, the workplace is too uncontrollable as a teaching environment"); "achieve world class standards in academic subjects for all students"; "teach generic high performance skills as identified by SCANS"; "you *have* to have a postsecondary education component as in 2+2 programs"; and so on . . .

8. *Economics and Demography*
We must also consider long-term economic and demographic trends, overlaid by the business cycle. We know the difficult demographics but we do not agree on the needed degree of upward skilling of jobs to be created in the future. The long recession makes it even more difficult for businesses to commit to investment in human capital for long-term growth.

9. *Ideal Solutions*
We have many different levels of skill requirements for entry-level jobs and different employer views of what constitutes a qualified entry-level worker. And we have solutions of differing expense and quality. We tend to think only of the top-of-the-line, ideal approach that is very hard to attain for all, and we see fatal flaws in lesser approaches, even though these may be much better than what now exists for most youth. Thus, we may be for an Apprenticeship model, but wholly reject even a *good* Cooperative Education model.

10. *Tapping the Employer Viewpoint*
We tend to confuse waves of media hype for a program *name* boosted by a major magazine or TV documentary. In the 1970s, there was a wave of articles about Career Education. Now it is the turn of Youth Apprenticeship. How many employers are talking up either one of these? How many school systems? What do employers think the best substantive approach is? What terms are they comfortable with?

A Central Proposition

Personally, I have found these ten conditions to be formidable in the fashioning of my own views of a unique American response to a growing desire to do something about the school to work transition. But I have, over 25 years, reached one strong conviction. *It is that the key to the "system" is a collaborative approach between the school and employers. While the approaches of our competitors vary hugely, they do have this in common* (excepting, perhaps, in other English-speaking countries). West Germany clearly does it through apprenticeship, but Japanese employers hire youth directly from schools and do their own training, through their agreements with specific schools that select the top students and act as their hiring agent. I accept both approaches, and those in between, if the schools and the employers have agreed on them. Of course, while school-employer collaboration is key, it is not necessarily the whole system.

We must present a clearly articulated approach that is also understandable. There should not be complexity and

confusion in the central proposition. While this must be made crystal clear, however, there does not need to be standardization in its implementation. To me, the central proposition is as follows:

> *School systems and employers (spurred by or joined by government) must jointly design approaches in which they share responsibilities for preparing youth for entry into employment in the primary market, and for facilitating that entry when students are certified to be properly prepared.*

I would call this an Employer/School Compact, or Collaborative Education and Training, or Experience-Based Education and Training, or School-Work, or anything else that identifies the central proposition. It is the key step in whether we are to have a *system*, and it is the key to the drawer wherein lie other keys—better occupational choice, better information to make choices, contexts for academic instruction, "transparency" between school and work requirements (to use Steve Hamilton's phrase), and "signaling" from the labor market (to use John Bishop's phrase) to raise the motivation to do well in school.

This collaboration can result in different forms, different degrees of employer responsibility, of school responsibility and of skill standards, and of standardization. It can occur between one school and a number of employers, in a whole community, in a whole state, and it can be aided by federal legislation (but not likely created solely that way, since employer participation cannot be legislated). It can also include programs operated entirely by employers, if they provide the classroom element. And it can be pieced together by different advocates who put in place their preferred form of collaborative arrangements.

What are the forms this collaboration might take? In the following chart I have described some forms, somewhat in declining order of responsibility for the employer role and for standardization of certification of skills, and in ascending order for the school role. Except for the traditional apprenticeship approach in the U.S., I have not used names of things that now have currency, because a name like Youth Apprenticeship conveys such different things to different people, and what it includes is likely evolving. Also, I suspect that some advocates of Youth Apprenticeship might, upon examination, embrace forms of collaboration not now labeled in this way.

Form #2 seems to be what most Youth Apprenticeship advocates have in mind; I have called it Industry Certified Training, partially to follow my rule of not using names that already have currency. This is along the lines of the name William Kolberg and Foster Smith gave the West German approach in their recent book.[1] Also, John Dunlop suggested it be labeled Certified Skill Training.

Readers may recognize existing and past efforts among the others. For example, #6 is Career Academies, as they started in Philadelphia. Some are at the community college level (such as providing customized training to industry).

1. *Registered Apprenticeship*
   While the U.S. Apprenticeship Program has been dwindling in relative size, it is considered to be a very high quality approach to training. It is expensive and is not separate, in that it is part of the total bargain between the employer and the union in joint programs. It does not now reach secondary school-age youth, but efforts should be made to have collaborative programs between secondary schools and traditional apprenticeship programs (and there are such examples in the U.S.).

2. *Industry Certified Training*
   The table describes the content of a modified West German model for secondary school-age youth. It includes a continued school role until certification, and thus avoids an early decision not to go to college; that option would remain open (unlike the early tracking of the West German system). The employer pays for wages and work site costs. Agreement on standards is the central feature.

3. *Subsidized Industry Certified Training*
   This is the same as #2, except that an effort would be made to secure employer participation through sharing the cost. The table lists various forms this might take. Employers have more problems than just cost, but for many this may tip the scales toward participation.

4. *Work Site Access for Structured Training*
   In #1 through #3, the general apprenticeship mode is used: youth are in paid jobs and they are working while receiving structured training. In this approach, they are not employees; the facilities and employer expertise are being used to train, as an alternative to the vocational education classroom. The school plays a larger role and the employer assumes less responsibility than in #1-#3. Many employers may find this to be a more acceptable model.

5. *Purchased Work Site Structured Training*
   Same as #4, except that the public education system pays employers for structured worksite training. Of course, cost sharing could occur also.

6. *School Instruction, With Experience and Informal On-the-Job Training*
   The school has full responsibility for formal instruction, but it is combined with (and related to) carefully chosen part-time employment in which students receive the *informal* on-the-job training typical in U.S. firms.

7. *Career/Occupational/Industry Specific Magnet Schools* While instruction is totally within the public education system, the school is created with considerable industry participation and involvement, assuring employer approval and increasing the odds that graduates will be hired in the industry.

8. *Articulation with a Two-Year Postsecondary Program* Any of the above in which the student can progress on a two- year program of postsecondary education, in a program that dovetails with the secondary school and work site program.

Any of these forms, *when done well*, would represent a very large improvement in the arrangements we now have. While a particular school or school system might go all one way, several of these could exist side by side, depending on the proclivities of employers in particular industries, or the level of skill required in particular occupations, or the degree of need employers have to get access to better trained entry-level workers in skill shortage areas.

* * *

The principal reason for this memorandum is to help stimulate discussion and to develop consensus on a work-site-based complement to school instruction. There are other worthwhile initiatives that need support and that are not directly addressed here, such as the integration of academic and vocational education and the creation of occupational guidance in the high schools or elsewhere. Also, a shortage of worksite experience opportunities requires the development of community service options to complement private sector options.

[1]They call it Certified Career Training. About apprenticeship they write: "Although the apprenticeship program supplying skilled craftsmen to the building trades remains effective, it is not feasible to strengthen and expand this concept so that it becomes the main provider of skilled workers." (See William H. Kolberg and Foster C. Smith. *Rebuilding America's Workforce: Business Strategies to Close the Competitive Gap.* Homewood, IL: Business One Irwin, 1992.)

EMPLOYER—SCHOOL COMPACTS

(For The Youth Transition)

EMPLOYERS	SCHOOLS	SUPPORTING FEATURES
1. Registered Apprenticeship		
The employer, or the employer and the union, establish Apprenticeship programs along the lines of registered programs in the U.S. These would be of several years' duration, beginning at age 16, with wages on a graduated scale leading to Journeyman status. Structured on-the-job training is combined with classroom work. Continued employment with the firm is typical, but not guaranteed. The employer or the joint apprenticeship and training committee is principally responsible and bears the costs of training. (Classroom work is sometimes publicly subsidized.) In the U.S., the joint employer-union programs are established as part of the total collective bargaining agreement.	The school provides a strong academic program until age 16, possibly awarding a "Certificate of Initial Mastery," as proposed in the *America's Choice* report. The school (or the employer) could provide the classroom instruction (typically one day a week) complementing the on-the-job training.	• Since students make a critical choice at age 16, needs strong information and guidance function not now available. • Industry-set standards for certification, preferably industry-wide, with complete portability of credentials.
2. Industry Certified Training (a Modified West German Model) (A)		
Employers provide structured on-the-job training and paid employment on a part-time basis. The training is closely linked to the instruction provided by a school partner. The employer commitment is likely less than the three or so years in a traditional apprenticeship program; the approach is tailored and more flexible than in (1) above. Employers pay both wages and training costs, offset by the value of the work performed (but without standardized wage requirements). No commitment to hiring after training is completed, but expected to be a frequent occurrence.	The school, as a partner with industry, continues a strong role after age 16, providing academic instruction to help keep options open as well as providing the occupational classroom instruction that dovetails with the structured on-the-job training provided by employers. Setting standards and certification requirements requires heavy involvement of industry and trade association.	Same as in (1), except that continuation of academic instruction keeps more options open and local standards may have to suffice, as we work toward widely accepted standards and certification with portable credentials.

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EMPLOYERS	SCHOOLS	SUPPORTING FEATURES
3. Industry Certified Training (a Modified West German Model) (B)		
As in (2), except that the employer role is subsidized by government. It could be through specifying this form of training (among others) in a tax credit, or crediting both training and wage expenses for students under a Training Levy, or through the extension of the Targeted Jobs Tax Credit, or through direct reimbursement for the cost of structured training.		
4. Work Site Access to Structured Training (A)		
Employers provide *access* to structured work site training provided by company personnel, perhaps combined with school personnel. This is done so as to minimize interference with production schedules (on unused equipment, after hours, Saturdays, etc). The program design is joint with the school. The employer does not pay wages and actual participation in production is minimized. Certification is by the school, under standards worked out with industry participation. Employers have a good opportunity to select prospective employees.	The school carries larger responsibility for instruction and design than in (1) and (2). Instruction is enhanced by use of work site facilities and employer training capability. School systems seek strong participation from employers in establishing skill standards and certification requirements.	Requires a strong occupational instruction capability in the school, since employers will not be taking primary responsibility for instruction, and students will not have jobs through which they will get solid experience. However, the use of on-site training will create a much stronger program than one entirely school-based. Since certification is not as strong as in (1) and (2), a total record needs to be built, as in Worklink.
5. Work Site Access to Structured Training (B)		
The school system *purchases* training from employers, outsourcing training in order to get training on state-of-the-art equipment at the work site, and access to industry training capability. The public budget for vocational education now pays for training in the classroom, and has to purchase equipment used in the workplace; the net costs may not be substantially different. Much the same as in (3), except that the purchase arrangement gives the school system more control.	Same as (4).	
6. School Instruction, With Experience and Informal On-the-Job Training		
The employer provides part-time employment using *informal* on-the-job training, in the mode typical of U.S. industry for jobs that high school graduates typically get (albeit at older ages). No commitments are made to retain students, but employers have an advantage in selecting future employees. Employers maintain contact with school personnel on the education needs they believe students require to be effective in the workplace. Production offsets costs, and employers can select among students for recruiting full-time employees.	The school is wholly responsible for formal instruction. School systems and employers (and employer organizations) work together to create part-time experience opportunities. To accommodate the times for experience the school period could be extended, using summers, adding a year or extending work (or school) later in the afternoon. The schools and employers work to provide experiences that are substantial, avoiding straight labor in undemanding assignments. Instruction is designed to take advantage of the experience element, and school and employer personnel maintain communication.	Rather than structured training at the worksite, students get typical *informal* training, experience, tryouts in different kinds of jobs, and schooling in the culture of work. Half of high school juniors and two-thirds of high school seniors *now* have part-time jobs. These are completely uncoordinated with the school experience. A large school-employer effort would shift many of these students to coordinated programs. A "record" would be created (such as Worklink) drawing on both school and work experience.

EMPLOYERS	SCHOOLS	SUPPORTING FEATURES
7. Career/Occupational/Industry Specific Magnet Schools/Programs A consortium of employers in an industry (or across industries regarding a specific occupation), lead in the design of a school (or a school program). They look upon the school (program) as a key source of entry workers, and help it in a variety of ways, with equipment, loan of personnel, etc. Part-time employment (or summer employment) could be provided.	A largely school-delivered approach, but with leadership from employers, fits the trend toward magnet schools, and more student choices within the public system.	Requires a flexible public school system, responsive to employer judgment about curriculum and instruction methods. A record would be created, such as Worklink, to take to employers.
8. Any of the Above Articulated with a Two-Year Community College Program		
Requires all three parties—secondary schools, employers, and community colleges—to collaborate in the design of a system.		

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